

- 25 -

Claims

5 1. A method of obtaining substantially pure
cannabidiol (CBD) from plant material, which has a purity of
greater than 95% as determined by area normalisation of an
HPLC profile, which method comprises obtaining a
cannabidiol-containing extract of the plant material,
10 dissolving the extract in a solvent to form a solution,
removing insoluble material from this solution and
evaporating the solvent from this solution to obtain
substantially pure cannabidiol, wherein the solvent is a C5-
C12 straight chain or branched alkane or a carbonate ester
15 of a C1-C12 alcohol.

2. A method according to claim 1 wherein the
substantially pure preparation of cannabidiol (CBD) has a
chromatographic purity of 98% or greater, preferably 99% or
20 greater, and most preferably 99.5% or greater by area
normalisation of an HPLC profile.

3. A method according to claim 2 wherein the
substantially pure preparation of cannabidiol has a melting
25 point in the range of from 64 to 66°C.

4. A method according to claim 2 or claim 3 wherein
the substantially pure preparation of cannabidiol comprises
less than 1%, preferably less than 0.8%, more preferably
30 less than 0.6%, more preferably less than 0.4%, more
preferably less than 0.2% and most preferably less than 0.1%
 Δ^9 THC.

- 26 -

5. A method according to any one of claims 1 to 4 wherein the insoluble material is removed by filtration.

5 6. A method according to claim 1 wherein the solvent is pentane, hexane or propyl carbonate.

7. A method according to claim 6 wherein the solvent is pentane.

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8. A method according to any one of the preceding claims wherein the cannabidiol-containing extract of the plant material is a botanical drug substance (BDS) derived from the plant material.

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9. A method according to claim 8 wherein the botanical drug substance is prepared by a process comprising solvent extraction of the plant material.

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10. A method according to claim 9 wherein the botanical drug substance is prepared by extraction with carbon dioxide, ethanol, methanol or hexane.

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11. A method according to claim 10 wherein the botanical drug substance is prepared by a process comprising extraction with carbon dioxide (CO₂), followed by a secondary extraction step to remove a proportion of the non-target materials.

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12. A method according to claim 11 wherein the secondary extraction step is ethanolic precipitation.

- 27 -

13. A method according to claim 11 which further includes a charcoal clean-up step.

14. A method according to claim 13 wherein the
5 botanical drug substance is prepared by a process comprising:
i) decarboxylation of the plant material,
ii) extraction with liquid CO₂, to produce a crude botanical
drug substance,
10 iii) precipitation with C1-C5 alcohol to reduce the proportion of non-target materials,
iv) removal of the precipitate,
v) treatment of the resulting solution with activated charcoal, and
15 vi) removal of C1-C5 alcohol and water, thereby producing a final botanical drug substance.

15. A method of obtaining substantially pure cannabidiol (CBD) from plant material comprising:
20 i) decarboxylation of the plant material,
ii) extraction with liquid CO₂, to produce a crude botanical drug substance,
iii) precipitation with ethanol to reduce the proportion of non-target materials,
25 iv) filtration to remove the precipitate,
v) treatment of the resulting solution with activated charcoal, and
vi) removal of ethanol and water from the solution to produce a CBD-enriched extract,

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- 28 -

vii) re-dissolving the CBD-enriched extract in a C5-C12 straight chain or branched alkane or a carbonate ester of a C1-C12 alcohol,

viii) removal of solvent from the solution of step vii) to
5 obtain substantially pure CBD.

16. A method according to claim 15 wherein the solvent of step v) is pentane.

10 17. A method according to any one of claims 1 to 16 wherein the substantially pure cannabidiol is obtained in crystalline form.

15 18. A substantially pure preparation of cannabidiol (CBD) prepared from plant material using the method of claim 1, having a chromatographic purity of 98% or greater, preferably 99% or greater, and most preferably 99.5% or greater by area normalisation of an HPLC profile.

20 19. A substantially pure preparation of cannabidiol according to claim 18 which is a white crystalline solid at room temperature.

25 20. A substantially pure preparation of cannabidiol according to claim 19 which has a melting point in the range of from 64 to 66°C.

30 21. A substantially pure preparation of cannabidiol according to any one of claims 18 to 20 which comprises less than 1%, preferably less than 0.8%, more preferably less than 0.6%, more preferably less than 0.4%, more preferably less than 0.2% and most preferably less than 0.1% Δ^9 THC.

22. A substantially pure preparation of cannabidiol according to any one of claims 18 to 21 which comprises less than 1%, preferably less than 0.8%, more preferably less than 0.6%, more preferably less than 0.4%, more preferably less than 0.2% and most preferably less than 0.1% CBN.

23. A substantially pure preparation of cannabidiol according to any one of claims 18 to 22 which is obtained from cannabis plant material using a method comprising:

- i) decarboxylation of the plant material,
- ii) extraction with liquid CO₂, to produce a crude botanical drug substance,
- iii) precipitation with ethanol to reduce the proportion of non-target materials,
- iv) filtration to remove the precipitate,
- v) treatment of the resulting solution with activated charcoal,
- vi) removal of ethanol and water from the solution to produce a CBD-enriched extract,
- v) re-dissolving the CBD-enriched extract in pentane,
- vi) removal of pentane from the solution of step v) to obtain substantially pure CBD.

24. A substantially pure preparation of cannabidiol substantially as described herein and having an HPLC profile substantially as shown in Figure 3 as shown below.

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